

**AMENDMENTS TO THE SPECIFICATION:**

**Please amend the paragraph beginning at line 7 on page 1, as follows:**

The following seven Applications, including the present Application, are related:

1. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,887, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled "METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING  
COMPOSITE BLOCKING BASED ON L1 CACHE SIZE", having IBM Docket  
YOR920030010US1;
2. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,933, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled "METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING A  
HYBRID FULL PACKED STORAGE FORMAT", having IBM Docket  
YOR920030168US1;
3. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,888, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled "METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING  
REGISTER BLOCK DATA FORMAT", having IBM Docket YOR920030169US1;
4. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,889, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled "METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING LEVEL  
3 PREFETCHING FOR KERNEL ROUTINES", having IBM Docket YOR920030170US1;

Serial No. 10/671,935

Docket No. YOR920030330US1 (YOR.485)

5. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,937, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled “METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING  
PRELOADING OF FLOATING POINT REGISTERS”, having IBM Docket  
YOR920030171US1;

6. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,935, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled “METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING A  
SELECTABLE ONE OF SIX POSSIBLE LEVEL 3 L1 KERNEL ROUTINES”, having IBM  
Docket YOR920030330US1; and

7. U.S. Patent Application No. ~~10/~~\_\_\_\_\_, 10/671,934, filed ~~on~~\_\_\_\_\_, to on  
September 29, 2003, to Gustavson et al., entitled “METHOD AND STRUCTURE FOR  
PRODUCING HIGH PERFORMANCE LINEAR ALGEBRA ROUTINES USING  
STREAMING”, having IBM Docket YOR920030331US1, all assigned to the present  
assignee, and all incorporated herein by reference.

**The paragraph beginning at line 16 on page 21 is revised as follows:**

Previous work reduced the poly-algorithmic count from  $6^m$  to  $2^m$ , where  $m = M + 1$  is the number of memory hierarchy levels. Furthermore, previous work emphasized only one of six kernels but stating that a second DDOT kernel type was possible. Here, it has been shown that this complexity can be reduced to ~~six~~ four, irrespective of the number of levels in the memory hierarchy. Also, at the L1 level, this invention admits (see also the seventh above-listed copending application) that six types are possible or desirable instead of just one or two kernel types.

**The Abstract is amended as shown below. A clean version is provided on the next page.**

A method (and structure) for improving at least one of speed and efficiency when executing level 3 dense linear algebra subroutines on a computer, including selecting. An optimal matrix subroutine is selected from among a plurality of matrix subroutines stored in a memory that performs could alternatively perform a level 3 matrix multiplication or factorization processing.